

Chapter V:
PROJECTIONS

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The main purpose of providing population and land use projections is to establish benchmarks against which future land use decisions regarding the type, mix, character and quantity of future development products may be tested. This study focuses on those relationships for a defined planning period that extends from present time to 2030. In order to accurately project future land use demand, the “Projections” chapter will include the following data and analysis: population projections, household projections, residential land demand, retail sales projections, retail land demand, employment projections and office and industrial land demand.

Population Projections

Population growth will greatly influence future demands for residential, office, retail and industrial properties in the Town of Smithfield. Population forecasting is at best an “educated guess.” For this reason, population forecasts developed in conjunction with the Town’s Comprehensive Plan Update should be used only in the context of establishing a generalized analytical framework for the allocation of future land uses.

The future number of persons who choose to live in Smithfield will be influenced by market forces and the growth management policies of the Town, Isle of Wight County and other neighboring jurisdictions, in addition to several other inter-related factors. Thus, Smithfield’s population growth must be viewed in a regional context. While it is reasonably clear that a significant amount of growth will occur within the land areas annexed a decade ago by the Town from Isle of Wight County, it is difficult to predict precisely the pace at which this future development will occur because of the changing availability of land served by adequate community facilities.

In order to provide a projection for the Town of Smithfield, two different methods have been used: the straight-line method and the population growth capture method.

Straight-Line Method

The straight-line method uses a locality's past annual population growth rates to make educated guesses concerning future growth. As is reflected in Table V-1 below, three different annual compound growth rates (ranging from 1.38% to 3.0%) were incorporated into the straight-line method in order to provide a reasonable range of what the Town's future population could become based upon annual growth rates reflected within the Town over the past three decades. Using the straight-line method, it is estimated that the Town of Smithfield will have between 9,576 and 13,789 residents by the year 2030.

Population Growth Capture Method

The Population Growth Capture Method is slightly different from the Straight Line Method in that it uses current and projected population estimates for Isle of Wight County as the basis for projecting Smithfield's future population growth. This strategy is based on the assumption that Smithfield will continue to absorb a certain percentage of the projected growth for Isle of Wight County given the Town's role as the primary urban area in the County. According to the 1990 Census, Smithfield constituted 18.7% of the total population of Isle of Wight County. Smithfield captured approximately 20% of the total population growth in Isle of Wight County between 1990 and 1996. However, with the Town annexing 3.9 square miles of largely undeveloped County property in 1998, it is assumed that this capture rate will increase by a significant amount in the next ten to twenty years. Thus, three different capture rates (between 16% and 35%) were incorporated into the population growth capture method in order to provide a reasonable range of predicted future growth in the Town.

This method assumes that the Town will capture a constant annual percentage of Isle of Wight's growth between 2007 and 2030. Using this method, it is projected that the Town of Smithfield could grow to a total population of between 9,870 and 13,293 by 2030 (see Table V-2 on the following page).

Summary of Population Projections

Although each method discussed above utilizes a different approach in projecting future population growth, both are based entirely on historical growth trends within the region and assume a relatively rapid pace of continued growth. Neither, factors in the "supply side" of the future population growth equation, however. In other words, both methods are based solely on demographic statistical demand absent of any consideration of the political boundaries or physiographic features or the economic or political contingencies that could limit future development within the Town. Clearly, these factors will need to be considered along with these conservative population projections in the process of making sound future land use decisions.

In the meantime, these figures can be used to aid in the forecasting of future land demands, community facility demands and infrastructure support requirements. Based upon the results obtained using each of the two methods described hereinabove, it is projected that the Town of Smithfield will have a total population of between 9,576 and 13,789 by the year 2030. This would represent an increase of between 2,589 and 6,802 new residents during the upcoming twenty-three-year planning period.

Residential Land Area Requirements

A major objective of the Comprehensive Plan is to identify adequate areas for future development of appropriate residential housing units. For the Town of Smithfield to reach its projected 2030 population of between approximately 9,576 and 13,789, a range of new housing products of varying size, density and pricing must be accommodated within the corporate limits. These housing units will be built upon currently vacant property or developed in concert with the revitalization and redevelopment of existing structures and occupied parcels within the Town.

For planning purposes, it is important to use the Town's average household size projections to forecast the number and type of housing units that may be required to shelter the Town's future residents. Smithfield's estimated current average household size of approximately 2.49 is consistent with regional and State standards, in that it is declining over time. This reinforces the Town trend towards an increasing population of family household formations. Based upon Smithfield's average household size, it is projected that approximately 1,333 new households will be formed between 2007 and 2030, assuming that 75% of the projected population growth during this time will represent new household formations.

The amount of land that will be required to accommodate future housing units will be a function of the density of residential development allowed for differing housing products within the Town. Generally, housing type and density are related in the following manner:

- *Suburban single family detached residences at 1-3 dwelling units per acre;*
- *Townhouses at 6-8 dwelling units per acre; and*
- *Apartments at 12-14 dwelling units per acre.*

Obviously, the demand for housing types is influenced by many factors, including size of household, household composition and household income. In adhering to Town housing goals, the Plan's residential land use designations should allow enough flexibility to provide housing opportunities for persons of all economic backgrounds, focusing particularly on providing more single family detached residential housing opportunities.

The planning process should strive to reserve adequate and sufficient residential land areas for housing orientations satisfying the full range of potential development densities. Accordingly,

the average residential density is based on 3-6 dwelling units per acre. This average density may be applied to the projected level of new household formations to determine a range of anticipated acreage demanded for new housing in the near planning term. As can be seen in Table V-3 below, a range of between 222 and 444 acres is anticipated to be absorbed for new housing between 2007 and 2030.

Retail Land Area Requirements

An extended market analysis of existing retail sales volumes was developed in order to forecast the amount of commercial land which should be accommodated in the Comprehensive Plan. In basic terms, future sales volumes, and, hence, retail spatial demands for Isle of Wight County are projected based on the increased buying power of the anticipated future population growth increment. Since no Town-specific retail sales information data is available, County retail sales data are used for this retail market analysis. Using this sales data provided by the State Department of Taxation, per capita sales figures were calculated across twenty-four sales categories for the County. This County-based ratio is employed in computing linear extensions of future retail sales growth based on the forecasted population increases.

As is reflected in Tables V-4, V-5 and V-6 on the following pages, Isle of Wight County should realize an increase of nearly \$100 million in retail sales between 2007 and 2030. Reflected in this figure is the assumption that the existing store mix, tourist trade, and local buying power will continue at approximately the same pace over the projection timeframe. Although the development of a new shopping center and improvements to existing retail outlets in the Smithfield area may, in some ways, alter the character of the sales in the region, the retail market analysis model provides sufficient reliability to make commercial land areas assignments.

In order to calculate the Town's share of projected County retail sales growth, a retail "capture" rate (the percentage of the County's commercial trade expansion which will locate within the Town's corporate limits) must be carefully analyzed. Based on the existing retail share relationship within the region (the Town currently captures approximately 67% of existing regional sales) and retail growth precedents in similar communities throughout the State, the Town should anticipate and plan for the potential "capture" of between 67% and 75% of the region's consumer retail trade growth between 2007 and 2030. Applying this estimate, it is projected that the Town will experience an increase of between \$64.4 and \$73 million in annual retail sales.

This increase of between \$64 and \$73 million of retail trade growth between 2007 and 2030 can be translated into leasable square footage for new stores and total land area requirements to accommodate retail development. As is presented in Tables V-4 through V-6, the sales volumes are converted to Gross Leasable Area based on observed ratios as recommended by the Urban Land Institute. The total development area is then projected by using the basic relationship that

for every square foot of leasable space, three additional square feet are needed to provide a suitable and operable business site. This relationship between leasable space and gross land area needed to adequately support the space on a site is commonly referred to as a floor area ratio (FAR), a term that will be used extensively in the Future Land Use Plan of this Comprehensive Plan. These land area requirements include service areas within the buildings, common areas, minimal open spaces, storage spaces, parking lots and other site features. This generalized market study indicates that the Town will likely absorb between 29 and 33 acres in new commercial development between 2007 and 2030. The biggest challenge for the Town is to determine the proper locations for retail development and possible redevelopment, and to preserve them for such use.

Employment Forecast

Smithfield is projected to expand its employment base modestly in future years. This is consistent with its projected moderate increase in population. The method used to project the amount of employment growth within Smithfield is founded in the basic relationship that exists between the number of people who live within the region and the number who can find employment within the region (number of employees per population). According to the Virginia Employment Commission's (VEC) annual state employment report for 2006, Isle of Wight County provides a very attractive rate of 473 jobs per 1,000 residents (up from 427 in 1996). This figure is much higher than that of the overall region. Since no Town-specific data are made available by the VEC regarding job and wage census, the Plan will use County data as a means of estimating Town employment demands. The VEC data indicate that significant job expansion has taken place within the region in the past decade. This trend will have to continue if the region is to sustain this high rate of employment for the population levels projected.

In projecting employment levels, it has been assumed that the underlying population forecasts for the region, and more specifically, for the County are accurate. From these figures, we have determined the amount of employment expansion which would have to occur to support this growth. The projected County employment increases reflected in Table V-7 on the following page are obtained by multiplying these ratios by the assumed population growth; i.e. (Employment Growth = (Employment / 1,000 Population) * Population Growth). As reflected in the table, County employment growth projections are summarized for the period between 2006 and 2030. The retail trade industry group is not included within this forecast because retail employment growth is more accurately determined by an analysis of the retail sales projections. For planning purposes, retail employment levels are not critical in the assignment of land uses, since the amount of retail land demands can be more readily predicted from the sales forecasts as outlined in the previous section.

Between 2006 and 2030, an increase of 6498 employment sector personnel (not including the retail sector) are forecast to be employed within Isle of Wight County. The purpose for developing this analysis is to determine the amount of office and industrial land which will be required during the planning period. The following two sections outline the most probable demands for these two land use categories within the Town.

Office Land Area Requirements

Just as with the Retail Land Area projection process, the local market share “capture” technique is employed in the effort to project and allocate the appropriate land areas for office space in the Town. Predicted office growth is correlated to the number and type of firms that are likely to be attracted to the area. The number of employees which will work within these offices is calculated based on the number of future employees in the following industry groups: (1) Finance, Insurance & Real Estate; (2) Services and (3) Government employment.

The land area which will be needed to supply sufficient office space for employment within these sectors is estimated from normative standards for office development and spatial usage. Generally, 200 to 250 square feet of floor area is provided for each employee. The range of requisite floor area is determined by multiplying the number of employees by 200 and 250 SF/Employee, respectively. The total land area is then calculated by applying a FAR (Floor Area Ratio) range for suburban office space of .20 -.25. FAR represents the ratio of building area to total site area (Building Area / Site Area). Using this method, the County’s office land area demanded is projected to be in the range of between 44 and 68 acres (as is reflected in Table V-8 on the following page). Several major factors will influence the quantity of projected regional office growth which the Town stands to capture within its corporate boundaries--1). The relatively abundant amount of attractive (from a locational and economic standpoint) office land available throughout the region; and 2). the incentive, interest and ability of the Town to market itself as a competitive and attractive office-related employment environment in which to work. Given the numerous advantages of sites within its neighboring counties, the Town can expect to capture no more than between 75% to 80% of the projected County share. During the 2006-2030 planning horizon, this constitutes 33 to 55 acres of land demanded specifically for potential office development within the Town.

Industrial Land Area Requirements

Using the same method described in the previous section, industrial land requirements for Smithfield have been analyzed and projected below. By extending current County employment per capita ratios over the 2006-2030 timeframe, the overall increase in industrial-based employment could exceed 691 employees. Based on modern land use norms, the projected levels of new employment could absorb from 241 to 4290 acres of industrial development throughout the region (see Table V-19 on the following page).

The Town of Smithfield has a strong foundation upon which to attract growth in light industry. Several, minor light industries lie scattered within the Town today; although they currently account for a small portion of the overall economic base of Smithfield relative to the meat processing operations in Town. The majority of light industrial enterprises in the County are currently located outside of the Town boundary; however, if the Town were to pursue an aggressive economic development strategy including light industrial development, it is hoped that the Town could achieve a light industrial market share exceeding existing levels. Nevertheless, it is projected that the Town will capture only 50% to 60% of the forecasted County totals in new light industrial job growth. This projected capture rate translates into potential industrial land area requirements of between approximately 121 and 257 acres in the Town.

Urban Land Area Requirements: Summary

Using the projections established in the preceding sections of this chapter, one can begin to obtain a clearer vision of the future demands and pressures that will be placed on the Town. Each of these sections has presented the techniques, assumptions and forecasts for future land absorption within the Town for the major private sector land use orientations. Table V-10 on the following page summarizes these demand-based forecasts of urban land area requirements for the year 2030. Future residential land uses will continue to consume the largest amount of undeveloped Town properties. In comparison to all projected private sector development activities, residential growth will absorb approximately 5.5 acres out of every 10, with a potential land coverage ranging between 222 and 444 acres by 2030. This residential demand estimate provides a relatively broad band, even for planning purposes. In allocating these future residential demands to available land within the Town, it will be necessary to evaluate several different land use models of residential development density (by type and housing character).

Projected demands for retail, office and industrial space will likely compete, in many instances, for the same available properties. Between approximately 183 and 345 acres will be required to accommodate demands for these three land use orientations during the 23-year planning period. These demands will consume approximately 4.5 out of every 10 acres of private-sector development (excluding hotels and motels) by the Year 2030.

Estimates of areas to support private-sector development--i.e. future rights-of-way, public easements and public/institutional development--are provided in the urban land use forecasts, as well. Included are land areas which should be contemplated for support municipal services, facilities and infrastructure--ie. public roads, bike trails, developed parks, fire facilities, police and rescue services, schools and the like. Public rights-of-way for roads, streets and sidewalks will consume approximately ten percent of the total areas to be developed for urban land uses, while public and institutional uses will absorb five percent of this total.

The range of 405-789 acres of private sector land use absorption potential assumes that real estate opportunities will be readily available within the Town and that properties will be priced competitively within the regional marketplace. Thus, from a public planning perspective, the future land use plan must provide for choice and not simply allocate "an acre of land for an acre of demand."

Local land use plans can exacerbate this problem by not allocating acreages “over and beyond” the predicted levels of real estate product demands. Table V-14 introduces the concept of “free market multiplier adjustments” in an attempt to compensate for the potential for the Plan to “undersupply” private sector land uses within the Town’s corporate boundaries. This figure simply represents a multiple of actual land use demands yielding a “planning target” acreage to be provided on the master plan. From an economic standpoint, greater opportunities to capture the regional “fair share” of a given land use arise when larger “multipliers” are accommodated on the land use master plan. Where “multipliers” are low, capture potentials diminish from lack of choice, the residual land available for a given use is soon “priced out of the market,” and surrounding jurisdictions pick up the spill over demand.

In planning for Smithfield’s Year 2030 land use horizon, adhering to a “free market multiplier” equal to 3.0 would direct the land use plan to accommodate a range of 1,398 to 2,722 acres of private-sector development. In the formulation of the General Land Use Plan, the physical land holding capacities of the Town’s available undeveloped tracts have been considered to plan a distribution of land uses which both: 1). accommodates the projected land demands and 2). preserves Smithfield’s distinctive environment.